

470

Am 32

cop 2

LIBRARY
DR CHARLES X WEIGEL
9119 WOODLAND ROAD
SILVER SPRING
MD 2 1946

A.A.A.S. BULLETIN

VOL. 5

JUNE, 1946

No. 6

Published monthly by the American Association for the Advancement of Science. Office of Publication, North Queen St. and McGovern Ave., Lancaster, Pa. Editorial and Business Office, Smithsonian Institution Building, Washington 25, D. C., to which office all communications should be addressed.

Edited by F. R. Moulton and Howard A. Meyerhoff.

Single copy, 10 cents; annual subscription, \$1.00.

Entered as second-class matter at Lancaster, Pa., March 24, 1942, under the Act of August 24, 1912.

Affiliated Society Contributes to the A.A.A.S. Building Fund

The American Association of Economic Entomologists is the first affiliated society of the A.A.A.S. to contribute to its Building Fund. By mail ballot the entire membership of the society voted by overwhelming majority to transfer \$2000 from its permanent funds to the Building Fund of the A.A.A.S. with no restrictions attached to the gift.

The officers of the A.A.A.S. are very grateful for this generous contribution, particularly because it is an expression of close and cordial relations which have existed between the two societies for more than 60 years. The American Association of Economic Entomologists (A.A.E.E.) grew out of the Entomological Club which met with the A.A.A.S. from days in which the records are incomplete. In 1889, at a meeting of the A.A.A.S. in Toronto, Canadian and United States entomologists organized the present society and since that time it has been affiliated with the A.A.A.S. and met with it every year until the recent world war. The leaders in the organization of the new society were Dr. L. O. Howard, Permanent Secretary of the A.A.A.S. from 1898 to 1919 and President in 1920, and Mr. James Fletcher, Dominion Entomologist and president of the Entomological Club of the A.A.A.S. Thus the A.A.E.E. has been closely associated with the A.A.A.S. since its founding and its origin was American in the broad sense. Finally, at the meeting at which the Executive Committee of the society voted to recommend to its membership the contribution to the Building Fund there were eight past presidents who approved the action. In fact, the action taken at the meeting of the Executive Committee as re-

ported by Dr. E. N. Cory, secretary of the A.A.E.E., was by unanimous vote.

There was another antecedent of the action taken by the A.A.E.E. that is worth recording. At the meeting of the A.A.A.S. in Durham, N. H., 1941, a comprehensive symposium on "Laboratory Procedures in the Study of the Chemical Control of Insects" was presented by A.A.E.E. The A.A.A.S. was invited to publish the manuscripts as one of its symposium volumes and accepted the responsibility. Dr. F. L. Campbell, of The Ohio State University, was appointed as chairman of a committee on publication of the volume. While the manuscripts were being received for editing, Dr. Campbell came to Washington as an insecticide specialist in the Office for Agricultural War Relations. He participated largely in editing the book, a year later he became Editor of *The Scientific Monthly*, and two years later he suggested to Mr. D. L. Van Dine, then president of the A.A.E.E., that the society make a contribution to the A.A.A.S. Building Fund. As has been stated, the latest link to appear in this unfolding chain of events was the contribution of \$2000 by the A.A.E.E. to the A.A.A.S. Building Fund. And it should be mentioned that the action was taken long before any site had been selected for a permanent home for the A.A.A.S. or even any plans for acquiring one had been formulated.

It is not likely that the contribution of the A.A.E.E. will be the last consequence of the relations between A.A.A.S. and A.A.E.E. which began at the founding of the latter in 1889. Although the society has now been in existence for 57 years, Dr. L. O. Howard, who wrote its original constitution still survives at 89 years of age and maintains his interest in both societies. What reciprocal action the A.A.A.S. will be able to take when it develops an adequate new home will be awaited not only by the A.A.E.E. but also by many other societies affiliated with the A.A.A.S. The action of the A.A.E.E. has not only raised the question but it calls for comprehensive general plans for the development of organized science in this country and Canada. It calls for a decision on the fundamental ques-

tion of whether scientists can set up their own organizations and operate them without governmental assistance or control. That question lies immediately ahead of American scientists and upon its answer the future of organized science in this continent will greatly depend.

Forty-five Days

At the eleventh hour a reluctant Senate passed a Selective Service Extension Act which does no more than keep Selective Service legally alive until July 1. The act emerged from the House emaciated and torn, and what remained had to be passed by the Senate, for there was not even time for a joint conference on the provisions of the bill. The Press has condemned the House for the job it did on the bill proposed by General Hershey's office and supported by the Army and by the President. Whatever else the House may have done, it at least forestalled the liquidation of another class of civilian engineering and science students who will finish the academic work of the second semester during the 45-day extension.

Student personnel holds a precarious position with regard to induction. Congress is favorably disposed toward granting deferment to farm hands, thereby making a substantial reduction in the number of youths subject to induction into the Army or Navy. And nearly all college students have the physique and the intelligence which is being sought by the Army for the proper discharge of its current obligations. Plainly the proportion of inductions from this group will be abnormally high, and recent debate in the House and the Senate shows that there are some Congressmen who want it that way. The fact that a farm hand or a factory hand can be trained in, at most, a few weeks, whereas a scientist or an engineer must go through years of rigorous training means very little to those men whose chief concern is reelection rather than the continued technological preeminence of this nation.

In correspondence with the office of the Association, General Hershey has maintained that the universities and colleges are full to overflowing with veterans who will make good engineers and scientists, but the General assumes no responsibility for the fact that normal numbers of veterans are *not* entering—or reentering—these fields. A partial survey has shown that the number of veterans now enrolled in engineering is a scant 50% of the normal prewar enrolment; that the number in chemistry is not more than 25%, and it is still lower in physics, biology, and geology.

From purely selfish motives, scientists might well ask why they should oppose the discriminatory legislation which Congress may pass before July 1. The answer is that discrimination in favor of the farm group and other groups which have larger votes than scientists will create an economy of scarcity in the scientific and engineering professions for years to come. Many jobs with few qualified to fill them will inevitably lead to financial rewards that bear some relation to the engineer's and scientist's educational investment. But the trend will be away from fundamental research and toward applied research, which yields higher immediate monetary returns. The fact that all the major engineering societies and several of the larger scientific organizations do oppose further depletion of their ranks suggests that they are far more keenly concerned about the public welfare and about the future than many of those who have been elected or appointed—and who are paid—to anticipate national needs and to protect the public interest, paradoxical though this situation may appear to some brass hat.—H.A.M.

The Southern Regional Training Program

Three southern institutions, the universities of Alabama, Kentucky, and Tennessee, together with cooperating colleges and government agencies, have organized what is called the "Southern Regional Training Program" under the routine management of the Bureau of Public Administration of the University of Alabama. The purpose of the program just now entering its third year is to train and retain in the South talented young men and women who have taken a college degree in preparation for public service.

The South, perhaps somewhat tardily, has fully realized the great importance of preserving its natural resources of soil and forests and minerals. Now it takes the lead in recognizing equally the importance of developing and retaining its human resources, for without the latter the former would either remain undeveloped or be wasted. This new plan is an interesting illustration of the rapidly increasing appreciation of the value of human resources, not for war alone, as in some countries, but for all the finer things of civilization.

The Southern Regional Training Program is patterned somewhat after medical education. It grants fellowships of \$750 to college graduates for a year in addition to university fees. The course of the recipient of a fellowship is a combination, for one year, of university training for three quarters of the year and of practical

internship in a public office in some southern state for three months. The internship may be in a department of a state government or in a regional agency of the federal or a state government. Upon successful completion of the course the Fellow receives a Certificate in Public Administration from each of the three universities (Alabama, Kentucky, and Tennessee) primarily responsible for organizing and maintaining the project. A Fellow may continue his education at any one of the three universities for three months, upon the successful completion of which he may receive the Master of Arts degree. Students who are qualified for still further graduate training may apply for a supplementary Southern Regional Advanced Fellowship to assist them in their work toward the degree of Doctor of Philosophy.

In each of the two years during which the Program has been in operation 20 Regional Fellows have been enrolled. Over half of them now occupy posts with either state or federal agencies in the South; the others are continuing graduate work in southern universities with the expectation of entering public service after completing their courses. The formulation of this plan and the maintaining of it in operation will itself have an important influence on general attitudes toward governmental operations in the participating states; and the yearly addition of twenty young men and women with adequate training and high ideals of public service should, within a generation, effect a revolution in their state governments.

The Press Supports the Association

Leading daily papers for years have been giving generous space to reports of the meetings of the Association. With increasing frequency they have commented favorably upon its activities and have quoted from its publications. Now they are supporting its plans for acquiring a permanent home, as is illustrated by the following editorial from the May 7 issue of *The Evening Star* (Washington):

A.A.A.S. Home

The American Association for the Advancement of Science long has needed a home of its own. Its administrative secretary has had an office in the old Smithsonian Institution building for many years, but accommodations there have been far from adequate. The Smithsonian plant already was crowded to the bursting point when it gave hospitality to the A.A.A.S., and conditions have not improved since then.

But even if there were plenty of room in the Smithsonian establishment for the world's largest fellowship of scientific workers, a building specifically devoted to sheltering the enterprise of the A.A.A.S. would be wanted.

Those activities are expanding and require space for their growth. During the next century or so the whole picture of civilization either will be ruined by science or, providentially, preserved by it. The practitioners of "organized common sense" have discovered how to tap atomic energy. By the same processes of reason and logic, they now must learn how to employ their discovery to justify the survival of civilization. Such is their duty and their privilege. And scientists are well aware of both their obligation and their opportunity. They constitute a modern equivalent of Archimedes the Syracusan, who about twenty-one centuries ago declared: "Give me a lever long enough and a prop strong enough, and I single-handed can move the world."

The new A.A.A.S. building should be the "prop" just as the know-how should be the "lever" for science to do what the lay public expects science to do. It will not be simply a monumental luxury. On the contrary, it will be a structure with a strictly pragmatic purpose. The site at Scott Circle is convenient to the Carnegie Foundation, the National Geographic Society and other centers of activity of the same general character. It is not too distant from the Smithsonian. When the new edifice has been raised and placed in service, Washington will have even greater cause to claim to be the scientific center of the Western Hemisphere, if not of the entire globe. Should the A.A.A.S. need help from the local community toward that end, it will merit and deserve it to the full.

A Suggested Plan for A.A.A.S. Meetings

Regarding the problem of future annual meetings of the American Association for the Advancement of Science, discussed recently by Dr. Howard P. Barss, I suggest a different solution. Doubtless some reduction or dispersion of the present large numbers attending these meetings is necessary under present and prospective conditions of transportation and housing. Can a plan be found which will afford the needed relief and yet preserve most of the larger values of the present gatherings?

There is a definitely helpful broadening influence when large numbers of workers in the different branches of science can get together in one place, and sometimes in a single meeting. This influence is especially inspiring to the younger scientists, as I can testify from personal experience after joining the A.A.A.S. in 1900. If the plan discussed by Dr. Barss were adopted, the younger scientists would be out altogether, so far as the great annual meetings are concerned.

Why not divide the A.A.A.S. sections (and their affiliated societies) into three groups, to be called Divisions? Such grouping could be made on the basis of physical, biological, and social sciences. The sections and affiliated societies of the first Division would attend the A.A.A.S. annual meeting in one year, those of the second Division would attend in the second year, and those of the third in the third year. Then the cycle would be repeated.

Such a plan of grouping would result somewhat as follows: *Physical Division*: Astronomy, Chemistry, Engineering, Geology, Mathematics, Meteorology, Physics. *Biological Division*: Agriculture, Anthropology, Botany, Medicine (!), Zoology. *Social Division*: Economics, Education, History, Philosophy, Psychology, Sociology.

If the three proposed Divisions were not approximately equal in size and numbers, some other grouping might be necessary. Perhaps two Divisions would be enough. The nomenclature accords with public-administration practice in creating Divisions composed of sections.

In the other two years in each 3-year cycle, each Division of sections and affiliated societies would meet separately from the A.A.A.S. annual meetings. All of the units in each Division could meet together if they so desired. This would preserve the values of associated meetings of related groups, the broadening and inspiration of younger members, and the opportunity for large evening gatherings and outstanding addresses. Such speakers might even be the leaders from other Divisions.

By permission, an individual section and its affiliates might change over to another Division for an occasional year. For example, Chemistry might wish to meet with the Biological Division once in a while, or Medicine with the Social Division. On the other hand, certain affiliated societies, such as general honor societies (Phi Kappa Phi, etc.) and educational units, might continue to meet with A.A.A.S. in all years.

The working out of some such plan would reduce the present over-crowding, which has made some change necessary. At the same time it would continue the Association in its present helpful position of coherent cooperative leadership of the rank-and-file of science, and would preserve the unifying and inspirational value of large general gatherings and addresses.—Carleton R. Ball, U. S. Department of Agriculture.

Industry's Responsibility for Basic Research

Until the first world war there was, in general, a chasm between academic scientists and those engaged in industrial research. The former often gloried in their isolation from the remainder of the world, and even boasted that what they were doing could never be profaned by being put to practical use. The latter often looked with pity and sometimes with contempt at the dreamers who shut themselves in ivory towers. Fortunately for both groups those days have passed.

All scientists are engaged in exploring some part or another of the same universe. In their

researches they use the same tools—the same logic, the same mathematics, the same scales, the same electrical apparatus, the same optical equipment—and they arrive at the same fundamental laws and conclusions. They even speak the same technical language. Those who did not previously know it discovered it during the recent world war.

Only in their emotional attitudes have there ever been substantial differences between the two groups of scientists, and that difference was largely imaginary. The pure mathematician sees exquisite beauties in his various geometries; the industrial chemist sees equally exquisite beauties in his theories of organic molecules. The astronomer loves to roam among the supergalaxies; the producer of atomic bombs loves equally to explore atomic nuclei. Their knowledge and their theories merge in their explanations of the duration of the stars and the earth. The chasm that separated the two groups has vanished actually and emotionally. One consequence is that academic scientists look to industrial scientists for scientific discoveries, as well as for practical applications, and industrial scientists look to the universities not only for training of young scientists but also for carrying out long investigations for ultimate practical purposes.

Another and more obvious result of the changed attitudes of the two groups of scientists is the rapid increase of requests from industries for purely industrial research in university laboratories, and the willingness of the universities to undertake such work. There are dangers in these relationships that the universities, for economic reasons and because of the possibilities of prestige somewhat analogous to that of having a champion football team, will fail to keep clearly in mind that their primary responsibilities to science are to soundly train and highly inspire young scientists and to carry out basic research. It is equally important that industrial laboratories have the same ideals.

Fortunately the laboratories of many of the leading industrial organizations have precisely the point of view just stated. The fact is illustrated by a recent announcement of Swift & Company, the great Chicago meat packing company. The title of its announcement is the title of this note: *Industry's Responsibility for Basic Research*. For many years the company had made individual grants for various research projects; in 1943 it drafted comprehensive general plans which now are well under way. The fundamental purpose of these plans is to stimulate and support long-range research in food products and

agricultural problems. The grants are to universities and colleges, the entire amounts being paid in advance instead of over a period of years so that the recipients will be assured of the support stipulated. The administration of each fund is placed entirely under the control of the institution receiving the grant. Grants under this plan totaling \$600,000 have been made to 38 institutions throughout the United States, most of which are state colleges of agriculture and experiment stations.

When the United States became involved in war in 1941, Swift & Company expanded the support it had been giving to research of various kinds in the field of human nutrition. It became active in the organization and in the support of The Nutrition Foundation, the sole purpose of which is to increase knowledge of human nutrition, and also in support of particular research projects in the general field of nutrition. In the last five years 77 grants to a total of \$300,000 have been made by the company for work in 29 educational institutions distributed throughout the United States and Canada.

Somewhat comparable support of scientific research is being given by many industrial companies in this country. It is given in part because industrial processes rest ultimately upon scientific research. It is given also in part because the donors know that a stable and prosperous civilization must rest upon intellectual integrities such as are characteristic of science. It is often given for the same reason that men establish and endow astronomical observatories, art galleries, libraries, and educational institutions—for the simple reason that they desire to encourage what is best in their fellow men. Universities should accept contributions in support of scientific research only if they administer them as sacred trusts, not as easy sources of funds for operating expenses. Only on that high level will they be worthy of their founders and true to the responsibilities for the future of civilization that has been placed in their keeping.

A New A.A.A.S. Membership Directory

A new and complete membership directory of the more than 28,000 members of the Association is under preparation. Blanks for providing biographical material are being sent to all members. Prompt and complete replies are desired.

In certain important respects this new directory will be different from all others. First, it will include the names of members from all the fields of the natural and social sciences and edu-

cation represented by the 195 affiliated and associated societies of the Association family. No other directory has so broad a coverage of scientists and scholars. Secondly, it will contain the names of scientists who are residents of about 75 countries and major subdivisions of the larger countries. Thirdly, it will contain a geographical index of all members of the Association. That is, the names of members by countries, states, and cities and towns will be given in alphabetical order, together with their fields of principal interest. If one should desire to know the names of the leading chemists in Denver, for example, he could obtain them quickly from this index.

In addition to the directories of names, the new volume will contain, from the founding of the respective societies down to 1947, historical summaries of the Association and its 195 affiliated and associated societies, the American Philosophical Society, the American Academy of Arts and Sciences, the National Academy of Sciences, and the National Research Council. That is, it will contain a historical summary of nearly all organized science on the professional level in this country from its beginning down to 1947. Finally, the volume will contain summaries of the programs and the proceedings of the twelve meetings held by the Association, the Pacific Division, and the Southwestern Division from 1940 to 1946, inclusive.

Association Publications on Cancer

Within two years the Association has published two symposium volumes on cancer and manuscript for a third will be soon sent to the printers. The first volume, "Mammary Tumors in Mice," all the contributors to which are members of the National Cancer Institute of the National Institute of Health, is limited to discussions of one kind of malignant tumors in one species, the mouse. The materials for investigation are abundant, the effects of inheritance under various conditions has been extensively studied, and the danger is avoided of reasoning from one type of cancer in one species to possibly divergent types in other species. This "vertical approach," as it is called, attempts to attain definite results in a limited field rather than probable or only possible conclusions in a wider area. The wide approval this book has received from specialists in the field of malignant tumors has been gratifying.

The second volume, entitled simply "Cancer," grew out of a research conference on cancer held at Gibson Island, Maryland, in the summer of 1944 under the chairmanship of Dr. Dean Burk,

of the National Institute of Health. This volume might be said to have the "horizontal approach," meaning by that terminology that various tumors of malignant type are investigated in various species of animals subject to them. The discussions comprise five groups of papers: "The Virus Approach," "Carcinogenesis," "Enzymes," "Diet," and "Chemotherapy," a total of 22 principal contributions in addition to the discussions following their presentation. This book also has been very well received by specialists in the field of cancer.

The title of the third book on cancer is "Tumor Chemotherapy." It also is based on a research conference held at Gibson Island under the chairmanship of Dr. Burk. It comprises papers and groups of papers on various aspects of the chemotherapy treatment of cancer in its various aspects in various species. It will be printed in the same format as the preceding volumes, pages $7\frac{1}{2} \times 10\frac{1}{2}$ double column, illustrated, cloth bound. All these books are distributed from the office of the Association in Washington.

American Society of Civil Engineers

The Society was organized on November 5, 1852, as the American Society of Civil Engineers and Architects. It was inactive from 1855 to 1867, but was reorganized under its present name in 1868; it was incorporated in 1877.

There are 65 local sections of the Society, 123 student chapters, and the following technical divisions: Air Transport, City Planning, Construction, Engineering Economics, Highway, Hydraulics, Irrigation, Power, Sanitary Engineering, Soil Mechanics and Foundations, Structural, Surveying and Mapping, and Waterways.

Object. The object of the Society is the advancement of the sciences of engineering and architecture in their several branches, the professional improvement of members, the encouragement of intercourse between men of practical science, and the establishment of a central point of reference and union for members.

Membership. As of March 9, 1946, the membership roster was as follows: members, 6,370, entrance fee \$30, annual dues \$25 resident, \$20 non-resident; associate members, 8,160, \$25, \$25, \$20; affiliates, 78, \$30, \$25, \$20; juniors, 6,593, \$10, \$15, \$10; fellows, 1, payment of \$250 upon election; honorary members, 36. Total membership, 21,238. The list of members is published in the Year Book of the Society.

Meetings. Four general meetings of the Society are held annually: The Annual Meeting, the third week in January, in New York City; the Annual Convention, during the summer; the Spring and Fall meetings, in rotation in different sections of the country.

Research funds, medals, etc. Norman Medal, awarded to a member of the Society who is the author of the paper judged worthy of special commendation for its merit as a contribution to engineering science; J. James R. Croes Medal, awarded to the author of the paper next in order of merit to that to which the Norman Medal is awarded; Thomas Fitch Rowland Prize, \$60 and a certificate,

awarded to the author of a paper describing in detail accomplished works of construction, their cost and errors in design and execution; James Laurie Prize, \$40 and a certificate, awarded to the author of the paper next in order of merit to the paper to which the Rowland Prize is awarded; Arthur M. Wellington Prize, \$75 and a certificate, awarded to the author of a paper on transportation on land, on water, or in the air, and not restricted to members of the Society; Collingwood Prize for Juniors, \$50 and a certificate, awarded to Juniors for papers describing engineering works or investigations with which the writers have been connected. Freeman Fund, capital \$25,000; income to be used in the aid and encouragement of young engineers, especially in research work, and in the development of the science of hydraulics (a portion of the income may be used for an annual prize for a paper on hydraulic construction, preference being given to papers by younger members of the profession; there may also be traveling scholarships in engineering in the United States or abroad); Rudolph Hering Medal, instituted by the Sanitary Engineering division, to be awarded by the division to the author of a paper which contains the most valuable contribution to the increase of knowledge in, and to the advancement of, sanitary engineering; Alfred Noble Prize, a cash award, the amount to be fixed by resolution of the Board of Direction of the Society, and a certificate, awarded to a member of this Society, or of the American Institute of Mining and Metallurgical Engineers, or of the American Society of Mechanical Engineers, or of the American Institute of Electrical Engineers, or of the Western Society of Engineers for a technical paper of exceptional merit accepted for publication in any of the respective technical publications of these societies, provided the author is not over thirty years of age at the time; Daniel W. Mead Prizes, \$50 and a certificate for Juniors, \$25 and a certificate for Students, awarded on the basis of papers dealing with ethics; Karl Emil Hilgard Hydraulic Prize, \$50, awarded to the author or authors of a paper of superior merit, dealing with a problem of flowing water, either in theory or practice; J. C. Stevens Award, \$50, made annually for best discussion of a paper published in "Transactions," in the field of hydraulics; Construction Engineering Prize, \$50 and a certificate awarded to the author or authors of the best original scientific or educational paper on construction; J. Waldo Smith Hydraulic Fellowships, awarded to a graduate student, preferably a Junior of the Society, for one year, and restricted to research in the field of experimental hydraulics as distinguished from that of purely theoretical hydraulics; Columbia University Scholarship, awarded through the courtesy of Columbia University by the Society. The Society also participates in the annual award of the John Fritz Medal (United Engineering Trustees, Inc.) and in the Washington Award (Western Society of Engineers).

Library. The Engineering Societies Library covers all fields of engineering. It comprises the libraries of the American Society of Civil Engineers, the American Institute of Mining and Metallurgical Engineers, the American Society of Mechanical Engineers, and the American Institute of Electrical Engineers.

Publications. *Proceedings*, monthly except July and August, 1-67, 1873-1945, price \$10 domestic, \$10.75 foreign; *Transactions*, annually, 1-105, 1867-1945, price \$16; *Civil Engineering*, monthly, 1-11, 1930-1945, price \$5 domestic, \$6.50 foreign, \$5.75 Canadian; *Year Book*. The publications of the Society are furnished without extra charge to the entire membership.

Preparations for the Boston Meeting

A preliminary survey has been made of the facilities available for the Boston meeting of the Association next December 26-31, inclusive, and various local committees on arrangements have been appointed. The general headquarters will be in the Statler Hotel, and the exhibition and the registration will be across the street in the First Cadet Corps Armory. Adequate meeting rooms will be available in the hotels and in the several neighboring educational institutions for all the demands that are likely to be made. In making this statement it is realized that for the Association and its participating societies as many as fifty or even sixty rooms will be required at times.

In making preparations for the meeting five local committees have been appointed, one member on each committee from each of nine cooperating educational institutions in the Boston area. The Publicity Committee will have charge of arrangements for making readily available all legitimate news about science and scientists at the meeting. The Exhibition Committee will encourage and assist scientists in setting up in the Exhibition Hall exhibits of the laboratory equipment and processes they have used in their researches. Instrumentation is now such an important factor in scientific investigations that it promises to become an important part of science exhibitions. The progress of science obviously depends upon both theoretical considerations of what investigations should be undertaken and the methods and equipment available for carrying them out.

In comparison with the meetings of the British Association for the Advancement of Science, the meetings of the A.A.A.S. have been severely scientific to the neglect of social intercourse on any extensive scale. In earlier days, when the Association met during the summer months, there were many more parties and excursions than in recent years. Although the Boston meeting will be held in midwinter, it is expected that the Reception and Entertainment Committee will make the Boston meeting memorable for its social functions. The fact that the meeting will extend through Sunday greatly increases the opportunities that will be available for such diversions. On the severely practical side, the committee is considering the preparation of a pamphlet of information about restaurants, retail shops, theaters, museums and libraries; on the more social side, the committee is considering an afternoon tea and concerts for women and the possibility

of a "snow train" for everybody on Saturday or Sunday. The fact that there are two famous women's colleges in the Boston area, Wellesley and Radcliffe, many of whose alumnae will attend the meeting assures enjoyable social functions.

Although the social side of life is important, even at scientific meetings, there is necessarily another side which involves a great deal of drudgery. This aspect of arrangements for the meeting will be under what is known for brevity as the Equipment Committee. The committee is first making a survey of possible meeting rooms, outside of hotels, and especially of such equipment as projection apparatus, screens, blackboards, chart hangers, and the like which will be required in large quantities because of the large number of meetings which will be held simultaneously.

Finally, there is a Finance Committee to which the other committees will look for funds to take care of necessary expenditures. Scientific meetings are almost becoming "big business."

The Wild Places Are Calling

The recent report of the Director of the National Park Service, Mr. Newton B. Drury, is a refreshing reminder of days of peace. It recalls the visits millions of Americans have made to the many scenic wonders there are in this country. It reminds us that the Government of the United States has other responsibilities besides providing national defense and intervening in industrial strife. One of them is that of maintaining opportunities for wholesome recreation on a national scale.

In 1870 white men first extensively explored the marvelous region of geysers and canyons now known as Yellowstone Park. In 1872 this area of nearly 3500 square miles, by act of Congress, became the first "National Park" in the United States. At present there are 27 National Parks, with a total area of over 16,000 square miles, 84 National Monuments, with a total area of 14,500 square miles, and nearly 100 lesser areas, all set aside for free public use, whether they are regions of scenic grandeur or memorials of historic events. About half of the National Parks have been established since the close of the first world war.

During the war the number of employees of the National Park Service declined from over 5000 to fewer than 1600 in 1944 and 1945. The number of visitors declined by smaller fractions—from nearly 20,000 in 1941 to about 7,500 in

1944, but increased somewhat in 1945. The increase in the number of visitors to the areas under the National Park Service in recent decades has been astounding. In 1920 the number of visitors to these areas for the first time exceeded one million; in 1925 the number exceeded two millions; three millions in 1928; five millions in 1934; ten millions in 1936; fifteen millions in 1937; and twenty millions in 1941. These mass excursions have been due to the establishment of new recreational centers throughout the country, to the almost universal availability of the automobile for travel, and to a growing appreciation of the benefits of visits to wild places.

Never since the Civil War has this country been under such a severe and prolonged strain as during the last five years. The results are apparent on every hand. There are many persons who have almost hysterical fears of foreign countries and even for the future of civilization. With deep anxiety they follow unfavorable domestic news as it appears in the daily press or is broadcast by the radio. There is a widespread despair of the future, even among young men and women such as in other days were confident of having successful and happy lives. There is a widespread disposition to be harsh in judgments of others, whether they be politicians, the wealthy, or members of labor unions. There is a general tendency for organizations and individuals to demand what they want without regard for the needs of others.

We are not in a healthy emotional and mental state. We need to listen to the call of the wild places. Venus is brilliant in the western evening sky, hundreds of stars are overhead, and the streams make music as they plunge down their precipitate courses. There is healing for overwrought nerves in mountain air, and in the shade of mountain forests. We need to avail ourselves of the matchless opportunities for enjoying such things which, fortunately, have been placed within easy reach of almost everybody in this favored land.

Back Copies of Journals Wanted

Rationing of paper has ended, but still there is a shortage; not enough is being made. *Science*, like many other magazines, has been compelled to reduce the number of pages temporarily. Now, a shortage of back issues is developing. Conditions would be relieved if members would send by parcel post (postage will be refunded) to the Washington office: *Science*—March 1 and 29, 1946; *The Scientific Monthly*—all copies, 1945, and Jan., Feb., 1946.

Membership in the Association

Eligibility for Membership

Membership in the Association is open to all persons engaged in scientific work, whether in the fields of the natural or the social sciences; to all amateur scientists, whatever their special interests; and to all who desire to follow the advances of science and its effects upon civilization. Members having made substantial contributions to the advancement of science are eligible for election as fellows.

Dues and Publications

Membership dues are \$5 per year, including subscriptions for the monthly A.A.A.S. BULLETIN and either the weekly journal *Science*, now in its 103d volume, or *The Scientific Monthly*, now in its 62d volume. *Science* is a journal for professional scientists; the *Monthly* is a nontechnical journal for the intelligent public. The Association also publishes technical symposia and nontechnical books on science that are available for members at prices substantially below those to the public.

Organization and Meetings

The Association was founded in 1848, with an initial membership of 461. Papers in its early programs were classified as either natural philosophy or natural history. Now its work is organized under 16 sections and 195 associated societies having a total membership of over 500,000. Its annual meetings are the greatest regular gatherings of scientists in the world.

Nominations and Applications for Membership

Members may submit nominations for membership at any time, and persons desiring to become members can obtain membership application forms from the Office of the Permanent Secretary, the Smithsonian Institution Building, Washington 25, D. C.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthly*, as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.

Officers of the Association

President, James B. Conant; Administrative Secretary, F. R. Moulton; General Secretary, Otis W. Caldwell; Treasurer, W. E. Wrather.

Executive Committee: Charles F. Kettering, Chairman; Otis W. Caldwell, Anton J. Carlson, Arthur H. Compton, James B. Conant, Burton E. Livingston, Kirtley F. Mather, Walter R. Miles, F. R. Moulton, Fernandus Payne, and Elvin C. Stakman.

all
the
all
ts;
nce
ng
of

ub-
nd
3d
2d
en-
the
hes
nce
lly

an
ro-
hy
der
stal
ngs
the

hip
ers
the
ian

for
iflc
uld
mg-
ate

ers-
ald-

air-
H.
on,
on,